

ABSTRACT

A shower head structure (26) includes a shower head main body (78) of a one-piece structure formed in a generally cup shape and having a bottom wall (78A) provided with a plurality of gas injection holes (30A, 30B) formed therein and a side wall (78B) rising from a peripheral portion of the bottom wall. A plurality of gas diffusion chamber forming plates (82A - 82C) are housed in the shower head main body (78). A through-hole is formed in a head mounting frame (76) disposed on a ceiling of a processing vessel (24). An upper portion of the side wall (78B) of the shower head main body (78) is inserted into the through-hole, so that a part of the side wall (78B) is exposed to the exterior of the processing vessel. A cooling mechanism (84) is disposed at the upper end portion of the side wall (78B). Heat transfer between the cooling mechanism (84) and the bottom wall (78A) is enhanced, so that the temperature of the bottom wall (78A) can be controlled at a proper value, thereby preventing any adhesion of an unnecessary film onto the bottom wall (78A).

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